ABSTRACT

A method for decoding a word received at a current time instant into a symbol of a trellis code. The trellis code corresponds to a trellis diagram having N states associated with the current time instant. Each of the N states corresponds to at least one incoming branch. Each of the incoming

5   branches is associated with a symbol of the trellis code. The branch metrics are computed for the incoming branches such that a branch metric represents a distance between the received word and a symbol associated with the corresponding branch. The branch metric is represented by fewer bits than a squared Euclidian metric representation of the distance. For each of the N states, a node metric is computed based on corresponding branch metrics and one of the

10   incoming branches associated with the state is selected. One of the N states is selected as an optimal state based on the node metrics. The symbol associated with the selected incoming branch corresponding to the optimal state is the decoded word.